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www.michigan.gov/hai

SHARP: Bringing HAIs into Focus

Surveillance for Healthcare-Associated and Resistant Pathogens Unit
Michigan Department of Health and Human Services

In this issue

What's New with the SHARP Unit

The SHARP Unit would like to welcome our new Council of State and Territorial Epidemiologists (CSTE) HAI Fellow, Mike Balke! Mike will be spending the next two years working on NHSN data validation in Michigan hospitals and other HAI projects. If you would like your hospital 2014 CAUTI or CLABSI data validated, please reach out to Mike at BalkeM@michigan.gov.

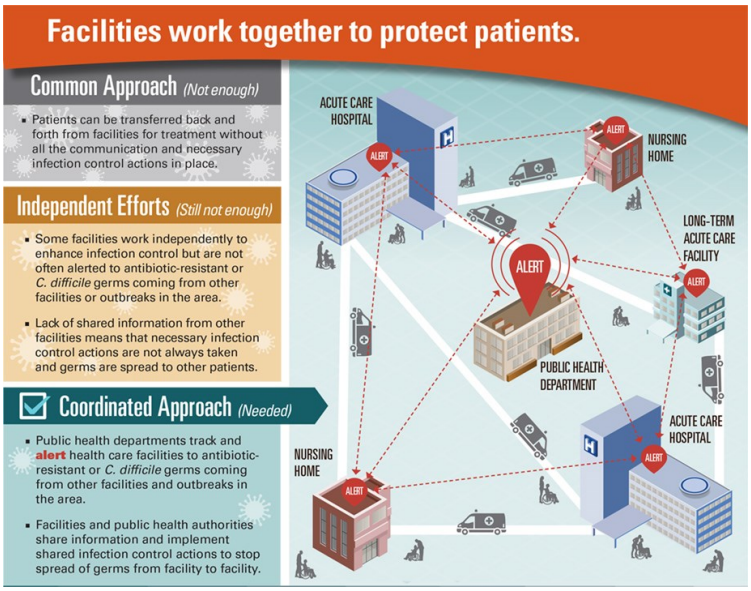
The two summer University of Michigan School of Public Health Certificate in Health Care Infection Prevention & Control (CHIP) interns completed their internships at the end of July. We would like to thank Katrina Espiritu and Allison Chan for all of their work this summer on Ebola preparedness and NHSN data analysis.

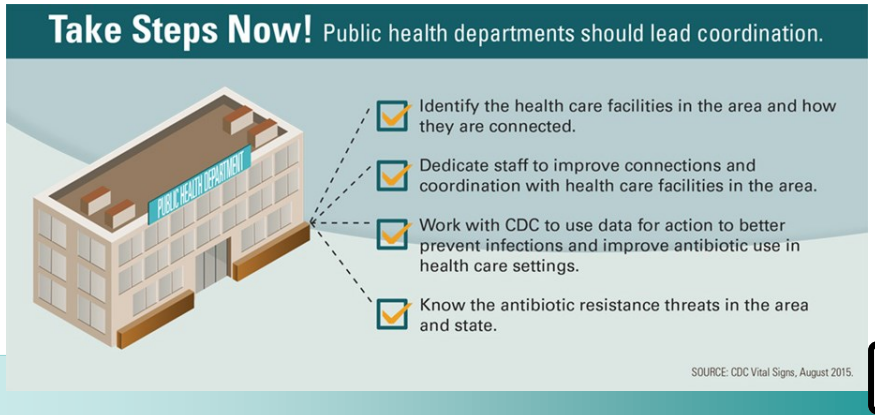
CDC Vital Signs: Making Health Care Safer

Problem: Antibiotic resistance is a threat. CRE can cause deadly infections and has become resistant to all or nearly all antibiotics we have today. MRSA infections commonly cause pneumonia and sepsis that can be deadly. *Pseudomonas aeruginosa* can cause HAIs, including bloodstream infections. *C.difficile* infections are at historically high rates.

Working together is vital. Infections and antibiotic use in one facility affect other facilities because of patient transfers. Facilities can improve antibiotic use and infection control actions so that patients are better protected. National efforts to prevent infections and improve antibiotic prescribing could prevent 619,000 antibiotic-resistant and *C.difficile* infections over 5 years.

Visit: http://www.cdc.gov/vitalsigns/stop-spread/index.html





Michigan's Special Pathogen Response Network

The Michigan Department of Health and Human Services Communicable Disease Division's SHARP unit, along with the Division of Emergency Preparedness and Response (DEPR), have secured funds to support development of robust infection prevention and control programs via Michigan's Special Pathogen Response Network (SPRN). The SPRN was established in 2014 to strengthen Michigan's emergency response to any new or emerging threat to public health, such as Ebola virus disease. The network is a collaborative group that includes MDHHS, Michigan hospitals, Life Support Agencies, local health departments and the regional healthcare coalitions.

The goal of the SPRN is to ensure that in the event of an emergency public health issue, potential cases go to the right place at the right time. All Michigan hospitals self-identified into one of 4 tiers based on the level of hospital infrastructure available to detect, isolate, notify and treat or safely transfer patients with known or suspected pathogens. Tier 1 and Tier 2 facilities are both treatment facilities, the difference being Tier 2 facilities will only accept in-network transfers. Tier 3 facilities are assessment facilities. Assessment facilities will identify, isolate, test and provide care while awaiting test results. (continued on p.3)

NHSN Surveillance Update

NHSN Version 8.4 Release (July 2015)
In the newest release of NHSN, there have been multiple updates, as follows:

Patient Safety Component

- Event Entry: When entering HAIs, the fields "Secondary Bloodstream Infection" and "Pathogen Identified" will autofill with "No" unless one of the following is selected: 1. positive culture, 2. positive blood culture, 3. other positive lab.
- LabID Onset Variable Issue: Some users experienced an unexpected error when the LabID event was modified and the onset variable was not properly accounting for this change. This issue has been corrected.
- New AUR Alerts. Facilities will now see alerts on their NHSN alert screen for missing "AU Summary", "AR Summary", and "AR Events" if the AU and/or AR Options have been selected in the facility's reporting plan but data have not been entered.
- Statistics Calculator: A new option is available in the statistics calculator which allows for a comparison and statistical calculations around a single proportion. This can be used to calculate a 95% confidence interval around a single proportion, and also to compare a proportion to a chosen benchmark.

Patient Safety Analysis Updates

- TAP Report Update: 1. The modification screen for the TAP Report output options has been updated to remove the "Group By" option, which was not applicable to these reports. 2. Users have the ability to select a Target SIR for the calculation of the cumulative attributable difference (CAD). In the "Other Options" section of the TAP Report modification screen, users can select from the following multipliers: HHS Goal, National SIR, Custom SIR Goal.
- Participation Alerts Output Option: "Line Listing—Participation Alerts" output option has been updated to align with the alerts that are listed on a facility's "NHSN Alerts" screen. They are organized into separate tables by Alert Type.
- CDI Infection Surveillance Rate Table: Unit-specific CDI rate tables for infection surveillance data errors have been corrected.

Healthcare Personnel Safety Component Updates

- Free-standing inpatient psychiatric facilities and inpatient psychiatric units within an acute care hospital will now be able to enter their HCP influenza vaccination summary data for the 2015-2016 influenza season.
- Outpatient dialysis facilities will now be able to enter their HCP influenza vaccination summary data for the 2015-2016 influenza season when those data are complete at the conclusion of the season.

—Allison Murad, MuradA@michigan.gov

CRE Surveillance and Prevention Initiative

CRE Educational Conference

MDHHS hosted the CRE Educational Conference on Thursday, June 25th, 2015 at the Inn at St. John's in Plymouth, MI. The conference was a huge success! There were 102 registered participants with 90 in attendance. The conference was well received by attendees and speakers. Speakers included Alex Kallen (CDC), Keith Kaye (DMC), David van Duin (UNC), Tara Palmore (NIH), Silvia Munoz-Price (Medical College of WI), Lilly Kan (NACCHO), and Paul Schreckenberger (Loyola). If you are interested in seeing some of the presentations, they are available under the MDHHS SHARP HAI Prevention Initiatives, CRE Surveillance and Prevention Initiative at www.michigan.gov/hai.

Regional Meetings for Participating Facilities

In addition to CRE Partners in Prevention calls which are held quarterly, Brenda will be getting participating facilities together to discuss regional CRE Prevention Plans. There will be 3-4 meetings across the state that will bring facilities together to share what each facility is doing to decrease CRE and how facilities can work together to stop further transmission across the continuum of care.

Regional Incidence Reports and Prevention Progress Reports – Coming Soon!

Brenda will be working on regional CRE incidence reports which will be distributed through the regional epidemiologists and shared at regional and local meetings (based on emergency-preparedness regions) to give facilities that may not be participating in the initiative and idea of CRE activity in their area. Additionally, Brenda is working on reports for participating facilities that will highlight their Prevention Plan(s) and illustrate the progress made since joining the initiative. These reports will also include the number of infections prevented per facility.

CRE Incidence in Michigan

Four hundred and eighty-one cases (inpatients, outpatients, and referrals) have been reported by participating facilities since September 2012. A majority of cases have been inpatient (non-ICU) cases. CRE incidence currently is 0.63 cases per 10,000 patient-days which is a decrease from our cumulative baseline rate of 0.94. To date, 153 infections of CRE (36 in LTACs) have been prevented across all Phase 1 and Phase 2 facilities.

—Brenda Brennan, BrennanB@michigan.gov

Michigan's Special Pathogen Response Network (continued)

These facilities should be able to care for a patient for up to 96 hours. Screening facilities are Tier 4. These facilities should have the capacity to identify, isolate and transfer patients prior to testing.

MDHHS has assembled a multidisciplinary team with backgrounds in infection prevention, laboratory, PPE, hospital preparedness and medical waste management that will strengthen infection prevention and response programs by offering technical assistance to all tiered facilities. These technical assistance visits will be guided using the CDC tool "Assessment Tool for Ebola Treatment Centers and Assessment Hospitals". Thus far visits have been made at all Tier 1 facilities. Tier 2 and Tier 3 are currently being scheduled. For more information about the SPRN or technical assistance visits please contact Noreen Mollon (SHARP), Jennie Finks (SHARP) or Linda Scott (DEPR).

—Noreen Mollon, MollonN@michigan.gov

Events/Calendar

Please visit our SHARP Unit Calendar, found on the SHARP Unit homepage. If you would like to add an event to this calendar, please email: MDCH-SHARP@michigan.gov

Helpful Links

www.michigan.gov/hai

www.mhakeystonecenter.org

www.mpro.org

www.mi-marr.org

www.msipc.org

www.apic.org

www.hhs.gov/ash/initiatives/hai/

www.hospitalcompare.hhs.gov

www.cdc.gov/nhsn

www.cdc.gov/HAI/prevent/prevention.html

www.cdc.gov/HAI/organisms/cre

www.cdc.gov/HAI/organisms/cdiff/Cdiff_infect.html

Articles

Hospital Characteristics Associated With Penalties in the Centers for Medicare & Medicaid Services Hospital-Acquired Condition Reduction Program
JAMA. 2015;314(4):375-383. doi:10.1001/jama.2015.8609

In fiscal year 2015, CMS instituted the Hospital-Acquired Condition (HAC) Reduction Program, which reduces payments to the lowest-performing hospitals. Hospitals are evaluated based on two domains. Domain 1 accounts for 35% of the score and is based on the AHRQ Patient Safety for Selected Indicators-90 composite measure. Domain 2 accounts for the remaining 65% of the score and consists of an average of 2 ICU-based nosocomial infections: CAUTI and CLABSI. Hospitals scoring in the worst quartile had their CMS payments reduced by 1%. The paper aimed to evaluate penalized hospitals and determine the association between composite measures and penalization.

Of the 3284 hospitals included in the HAC Reduction Program, 721 (22%) were penalized. Hospitals were penalized more frequently if they were larger, had more admissions, were accredited by the Joint Commission, were a level I trauma center, had a higher nurse-to-bed ratio, or were clinical surgical registry participants. There was a stepwise increase in penalization as the level of teaching hospital intensity increased.

It was found that hospitals with more structural characteristics reflecting volume, accreditations, and the offering of advanced services had better performance on publicly reported process-of-care and outcome metrics but were penalized significantly more frequently in the HAC Reduction Program. According to the article, these findings suggest that penalization in the HAC program may not reflect poor quality of care, but rather, these findings may be due to measurement and validity issues of the HAC program component measures. The authors suggest that the approach for assessing hospital penalties in the HAC program merits reconsideration to ensure it is achieving the intended goals.

Questionable validity of the catheter-associated urinary tract infection metric used for value-based purchasing
AJIC. 2015; 1-3. doi:10.1016/j.ajic.2015.05.024

Two different measurement systems are being used to track the US health care system's performance in lowering the rate of CAUTIs. Since 2010, AHRQ has shown a 28.2% decrease in CAUTI, whereas CDC has shown a 3%-6% increase in CAUTI since 2009.

CDC NHSN data are self-reported and converted into an SIR. Baseline data were derived from 1,749 hospitals that reported data to NHSN in 2009. The AHRQ CAUTI metric was derived from its analysis of approximately 18,000-33,000 randomly selected medical records per year from 800 randomly selected hospitals. There are limitations to both methods. Self-reported data may create concerns with data accuracy. AHRQ data is not risk-adjusted, and therefore may not have the same validity when comparing two hospitals.

The authors concluded that regardless of which factors are responsible for the widely varying results, the fact that the results are so different raises questions regarding the accuracy of the rates for CAUTIs that are currently used in value-based purchasing initiatives. Data verification should be considered a high priority when financial incentives are being levied.

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